

ABSTRACT

Non-hemolytic cytolytic agents selected from peptides, complexes of bundled peptides, mixtures of peptides or random peptide copolymers have a selective cytolytic activity manifested in that they have a cytolytic activity on pathogenic cells, being cells which are non-naturally occurring within the body consisting of microbial pathogenic organisms and malignant cells; and are non-hemolytic, having no cytolytic effect on red blood cells. The peptides may be cyclic derivatives of natural peptides such as pardaxin and mellitin and fragments thereof in which L-amino acid residues are replaced by corresponding D-amino acid residues, or are diastereomers of linear peptides composed of varying ratios of at least positively charged amino acid and at least one hydrophobic amino acid, and in which at one of the amino acid residues is a D-amino acid. Pharmaceutical compositions comprising the non-hemolytic cytolytic agents can be used for the treatment of several diseases caused by pathogens including antibacterial, fungal, viral mycoplasma and protozoan infections and for the treatment of cancer.